SERVICE MANUAL
Level 1&2

NOKIA 6300 NOKIA 6300b

RM-217 **RM-222**

Transceiver characteristics:

Band:

-RM-217: Tri-band EDGE phone for EGSM 900/1800/1900MHz

-RM-222: Tri-band EDGE phone for EGSM 850/1800/1900MHz

Camera: 2.0 Megapixel, 8x digital zoom

Display: 5.08cm (2inch) QVGA display with 16.7M true colors, resolution 240 x 320 pixel

Operating System: Series 40

Bluetooth

FM stereo radio

Memory card: microSD

Connector: mini USB Connector

Transceiver with BL-4c Li-Ion battery pack

Talk time	Standby	Note
up to 3.5h	up to 14.5days	Depends on network parameters

Environmental characteristics:

- Lead-free soldered

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CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	24.Nov.2006	Initial draft
Approved	1.0	9.Jan.2007	Approval

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1. INTRODUCTION

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist.
If you find any errors or if you have further suggestions, please notify NOKIA using the address below:
mailto:cc-ts-rc.documentation@nokia.com

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

Warnings:

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI–SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

Cautions:

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti–static workstation and that an anti–static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re–fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly.

Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore every Service Supplier has to take care of all precautions, which are mentioned in the service level related "Service Partner Requirements", available on NOKIA Online. Also see ESD Protection Requirements in this Service Manual.

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2. GENERAL REPAIR INFORMATION

In this section the technician will get some general hints how to carry out repairs:

- To familiarize oneself with NOKIA product read the tutorials or user guide on www.nokia.com -->Support--> Phones, by selecting the Phone Model.
- Before starting the repair you must take care of ESD precautions like being in your ESD Protected Area and connecting your wristband.
- Use gloves to avoid corrosion and fingerprints.
- Protect windows and displays with a film to avoid dust and scratches.
- When cleaning the LCD Module any lint-free cloth can be used (e.g. Micro-Fibre cloth).
- When cleaning the pads you have to use a soft cloth/ESD brush and Isopropanol. It is not allowed to use a glass fiber pencil because it scratches the surface and will lead later on to corrosion.
- Mechanical parts (except shielding lids and bent parts), which didn't repair the failure, can be reused, if they are not soldered.
- When removing the shielding lids make sure to replace them with new ones, otherwise the high-frequency leakage can have an influence on the device.
- Always use original NOKIA spare parts.
- Check the soldering joints of the parts, which are concerned regarding the indicated error (e.g. soldered connectors or switches) and resolder them if necessary (Level 2 only).
- Remove redundant soldering flux after repair.
- Meet the torque requirements when assembling the unit (see also the document "torques for transceiver assembly" on NOKIA Partner Web Site/NOKIA Online).
- Always use your own equipment for testing where you are sure that it works. E.g. if the customer complains about charger function, please test the phone with your own charger to be sure if phone or charger causes the malfunction.
- A SIM card is needed for all GoNoGo tests.
- When doing the fault log entries, always note the Item code, which caused the malfunction. Also, fill in the appropriate part code from the assembly, if needed.
- Please be aware that some malfunctions could be software related and solved by an update.

- There are several documents available on NOL, which have to be followed:
-
- First, take care for the latest content pages of Service Bulletins, which are always available for each folder on NOKIA Online. This is also important to recognize, if existing documents have become invalid.
-
- The service level indicator at the bottom of each document tells the appropriate destination.

Downloads > Support Library >

1. Instructions
2. General Service Bulletins
3. Product related documents
4. Spare Part Service Bulletins
5. Service Tools Service Bulletins
6. Common Software Service Bulletins
   etc,...

Use General SB-217 as a reference or overview.

Please also check NOKIA Online (NOL) for latest news and files on a regular basis.

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3. PATHFINDER FOR WORKSHOP STAFF

This is the NOL page (NOKIA Online) which is currently available in Europa, Middle East and Africa only!

In addition to the information in this Service Manual, there are several instructions and information, which have to be followed. Main documentation database is **NOKIA Online** with the purpose of serving different multimedia content, like video clips or interactive tutorials.

It is mandatory to watch for newest technical and organizational information on a daily basis to be updated as required (see **"Latest files in Support Library"**). Every new information has to be processed and implemented as soon as possible.
When logged into NOL you can also find needed information in different folder like:

Support Library → **Phones** →
Service Manuals
Service Bulletins
Software
Repair Information

Level 1&2 e-learning (former NOKIA CarePoint) on NOKIA Online

Former NOKIA CarePoint content, such as	• **Online Troubleshooting** • **Product information** • **Videos – Disassembly/Assembly**	can be found on **NOKIA Online**

Nokia 1100 Technical Training - Microsoft Internet Explorer provided by NOKIA
NOKIA
CONNECTING PEOPLE
Nokia 1100 Technical Training
Help
Site map
Glossary
Close
Home
Overview & Guides
Disassembly & Assembly
Troubleshooting
Nokia 1100 Technical Training
This training offers a quick overview of the Nokia 1100 phone and support for how to repair and use the phone.
Overview & Guides
Disassembly & Assembly
Troubleshooting
Get a quick overview of the phone and how to use it.
Learn how to remove and reassemble the mechanical parts of the phone.
Fixes for most common problems with the Nokia phone.
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NOKIA Online
↓
Care Services
↓
Training
↓
Phone Models

Level 1&2 e-learning courses offer a quick overview of the NOKIA phone and support for how to repair and use the phone:

Overview & Guides	Disassembly & Assembly	Troubleshooting
Basic information about the phone, features and technologies	Instructions how to disassemble and assemble the phone	Step-by-step instructions on how to locate and repair the most common problems with the phone

To reduce the server traffic it is recommended to download newest version of huge files like videos, Phoenix packages or Service Manuals only once and distribute it internally for further use.

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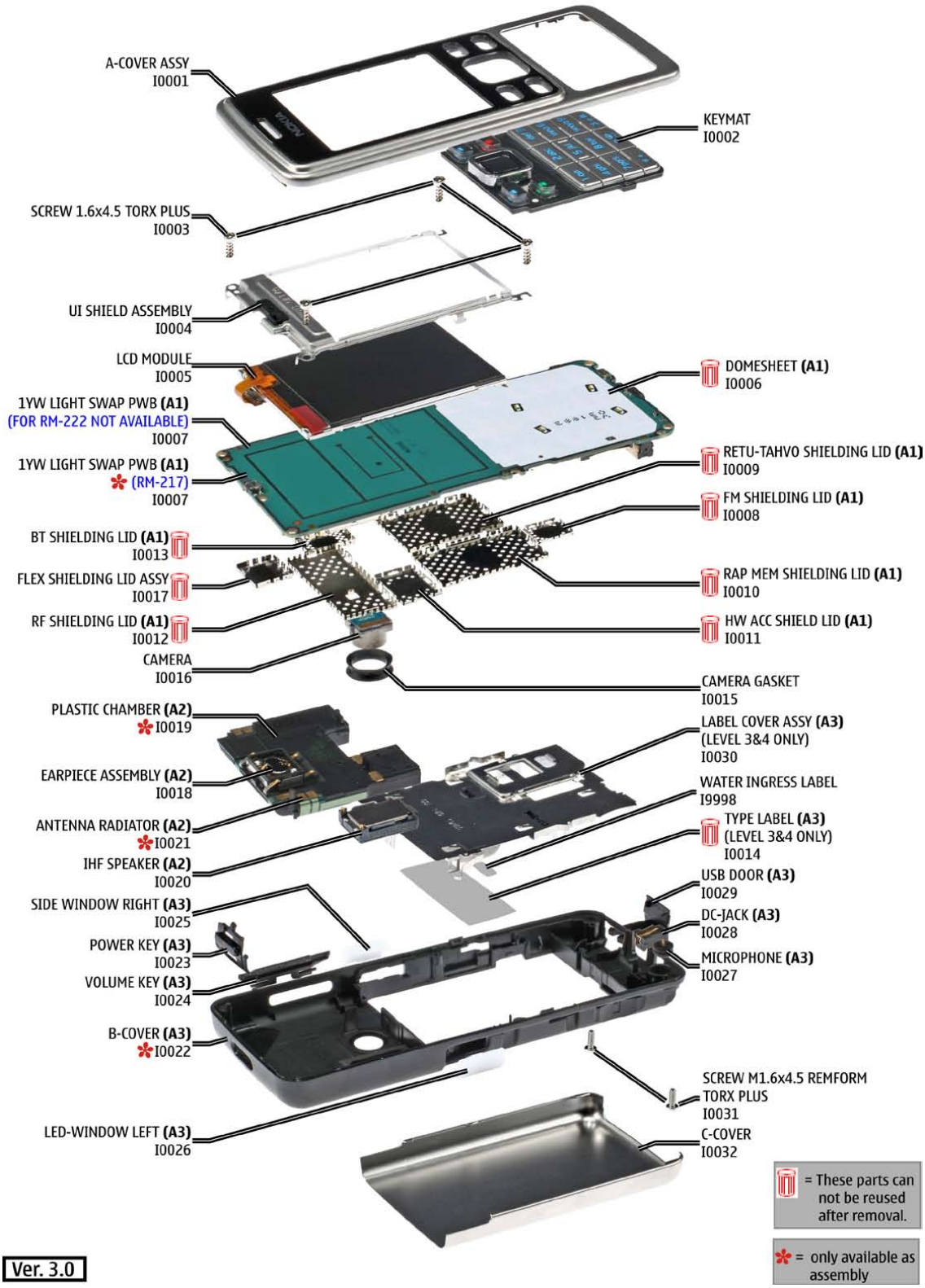
4. EXPLODED VIEW

See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.

6300 RM-217 / 6300b RM-222 EXPLODED VIEW


A-COVER ASSY I0001
KEYMAT I0002
SCREW 1.6x4.5 TORX PLUS I0003
UI SHIELD ASSEMBLY I0004
LCD MODULE I0005
DOMESHEET (A1) I0006
1YW LIGHT SWAP PWB (A1) (FOR RM-222 NOT AVAILABLE) I0007
1YW LIGHT SWAP PWB (A1) (RM-217) I0007
RETU-TAHVO SHIELDING LID (A1) I0009
FM SHIELDING LID (A1) I0008
BT SHIELDING LID (A1) I0013
FLEX SHIELDING LID ASSY I0017
RAP MEM SHIELDING LID (A1) I0010
RF SHIELDING LID (A1) I0012
HW ACC SHIELD LID (A1) I0011
CAMERA I0016
CAMERA GASKET I0015
PLASTIC CHAMBER (A2) I0019
LABEL COVER ASSY (A3) (LEVEL 3&4 ONLY) I0030
EARPIECE ASSEMBLY (A2) I0018
WATER INGRESS LABEL I9998
ANTENNA RADIATOR (A2) I0021
TYPE LABEL (A3) (LEVEL 3&4 ONLY) I0014
IHF SPEAKER (A2) I0020
USB DOOR (A3) I0029
SIDE WINDOW RIGHT (A3) I0025
DC-JACK (A3) I0028
POWER KEY (A3) I0023
MICROPHONE (A3) I0027
VOLUME KEY (A3) I0024
B-COVER (A3) I0022
SCREW M1.6x4.5 REMFORM TORX PLUS I0031
LED-WINDOW LEFT (A3) I0026
C-COVER I0032
= These parts can not be reused after removal.
= only available as assembly

Ver. 3.0

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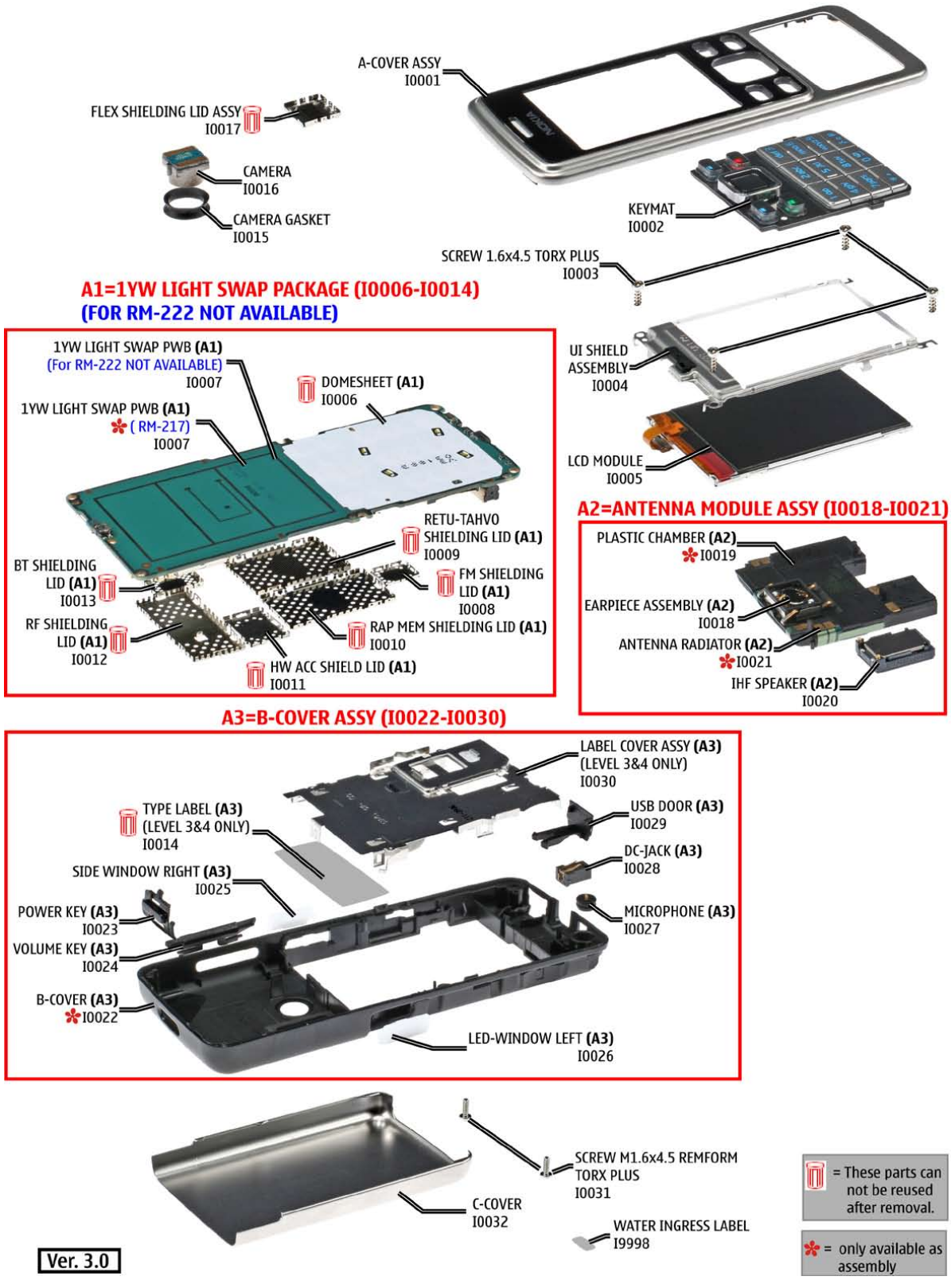
5. SPARE PARTS OVERVIEW

6300 RM-217 / 6300b RM-222 SPARE PARTS OVERVIEW


A-COVER ASSY I0001
FLEX SHIELDING LID ASSY I0017
CAMERA I0016
CAMERA GASKET I0015
KEYMAT I0002
SCREW 1.6x4.5 TORX PLUS I0003
A1=1YW LIGHT SWAP PACKAGE (I0006-I0014)
(FOR RM-222 NOT AVAILABLE)
1YW LIGHT SWAP PWB (A1) (For RM-222 NOT AVAILABLE) I0007
DOMESHEET (A1) I0006
1YW LIGHT SWAP PWB (A1) (RM-217) I0007
UI SHIELD ASSEMBLY I0004
LCD MODULE I0005
RETU-TAHVO SHIELDING LID (A1) I0009
BT SHIELDING LID (A1) I0013
FM SHIELDING LID (A1) I0008
RF SHIELDING LID (A1) I0012
RAP MEM SHIELDING LID (A1) I0010
HW ACC SHIELD LID (A1) I0011
A2=ANTENNA MODULE ASSY (I0018-I0021)
PLASTIC CHAMBER (A2) I0019
EARPIECE ASSEMBLY (A2) I0018
ANTENNA RADIATOR (A2) I0021
IHF SPEAKER (A2) I0020
A3=B-COVER ASSY (I0022-I0030)
LABEL COVER ASSY (A3) (LEVEL 3&4 ONLY) I0030
TYPE LABEL (A3) (LEVEL 3&4 ONLY) I0014
USB DOOR (A3) I0029
DC-JACK (A3) I0028
SIDE WINDOW RIGHT (A3) I0025
POWER KEY (A3) I0023
MICROPHONE (A3) I0027
VOLUME KEY (A3) I0024
B-COVER (A3) I0022
LED-WINDOW LEFT (A3) I0026
SCREW M1.6x4.5 REMFORM TORX PLUS I0031
C-COVER I0032
WATER INGRESS LABEL I9998
= These parts can not be reused after removal.
= only available as assembly
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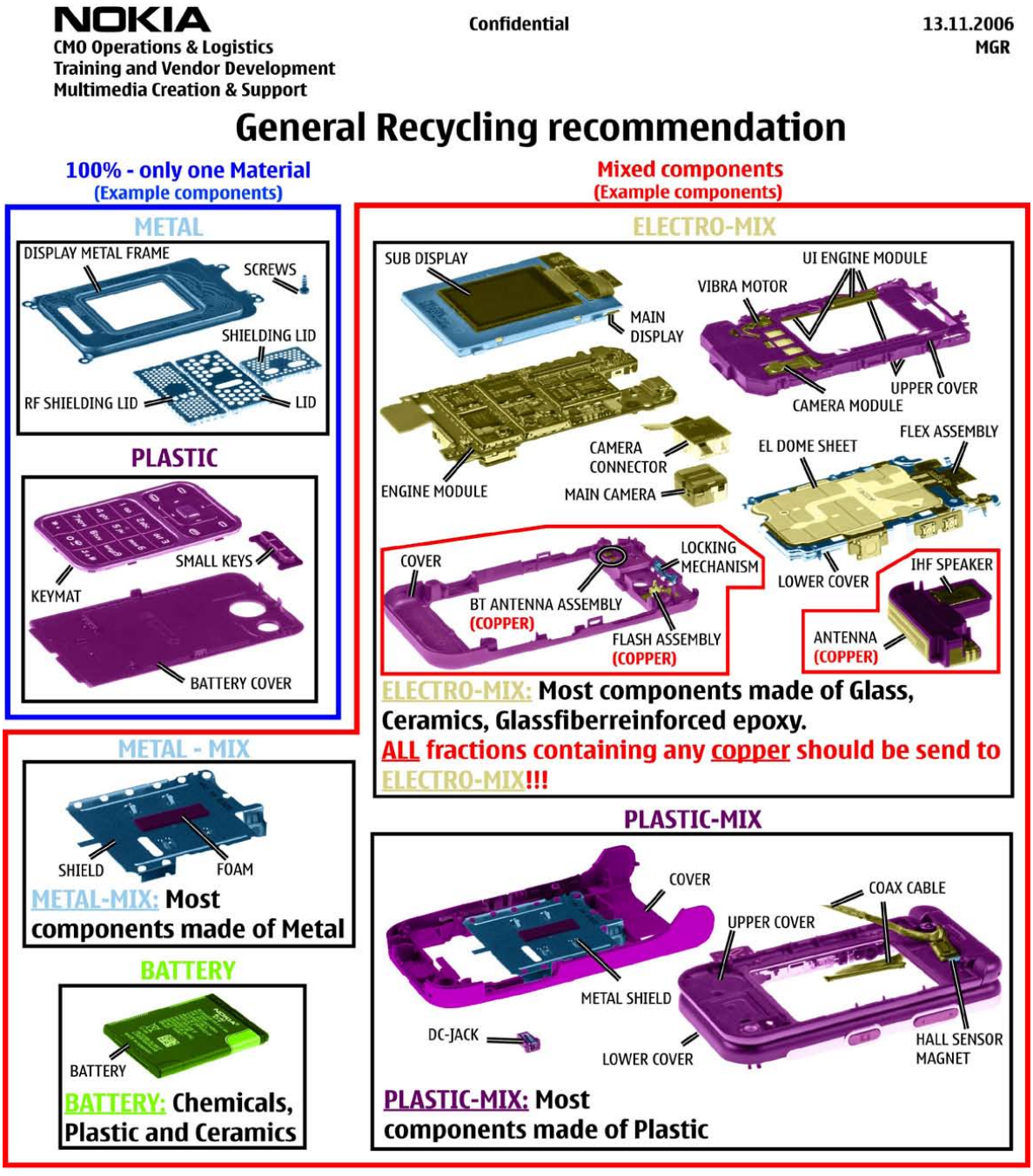
6. GENERAL RECYCLING RECOMMENDATION



Some of these options can be utilized directly and some need pretreatment as for instance dismantling, grinding, milling, etc.
For sorting the waste into fractions for recycling, your recycler will offer you more specific information, but a GENERAL RULE is:
Elecronic Equipment: There are recyclers that can process this "multimaterial" for high recycling yields.
Metals: Fractions containing metals must always be collected and sent for (metal) material recycling.
Plastics: Pure plastics fractions (i.e. covers) can be sent for (plastics) materials recycling.
Mixed Plastic/Metals: A metal fraction contaminated with plastics does not represent a problem for metal recycling/recovery whereas recycling/recovery of plastics is generally sensitive for contamination by other materials.

ELECTRO METAL PLASTIC BATTERY

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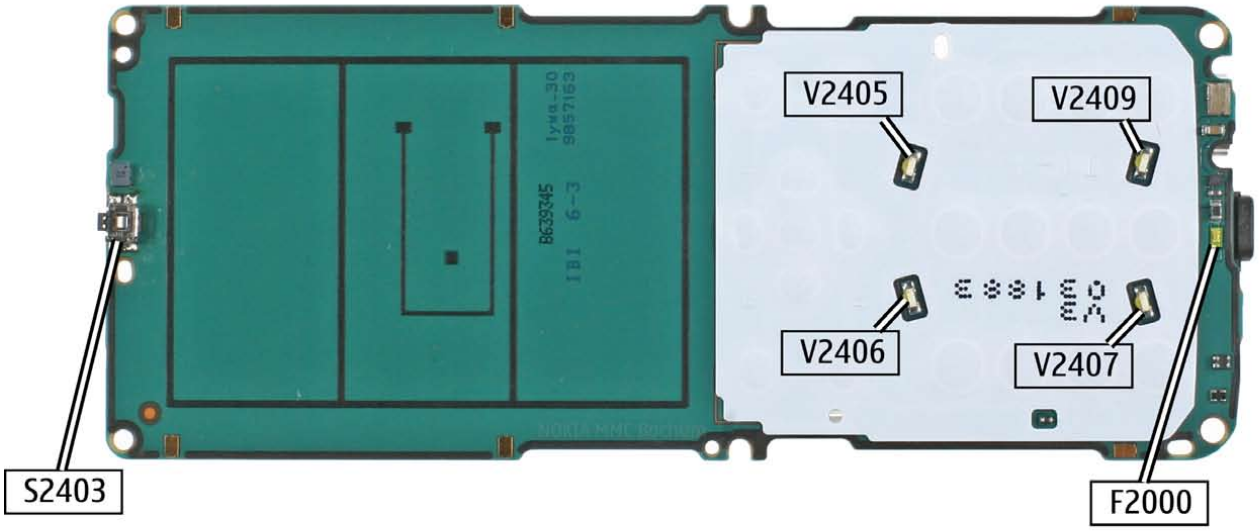
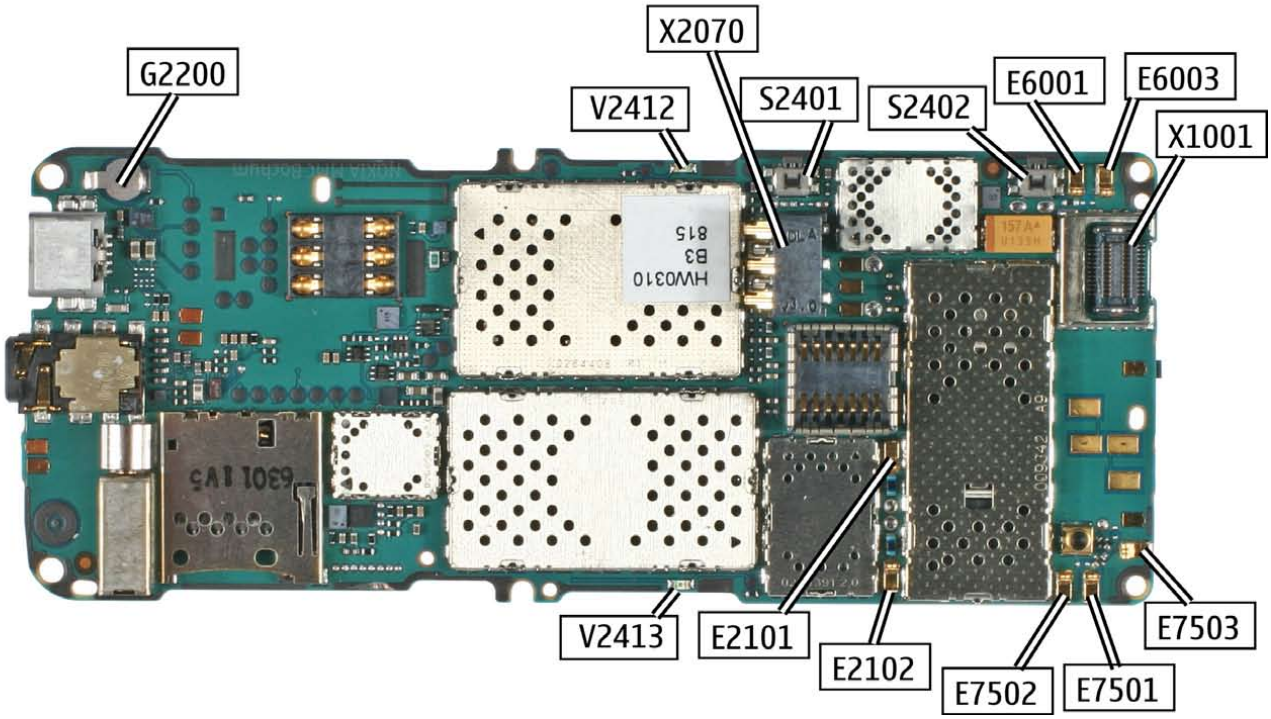
7. LEVEL 2 SOLDER COMPONENTS

N6300 RM-217/ 6300b RM-222 Components overview

Solder components only for LEVEL 2





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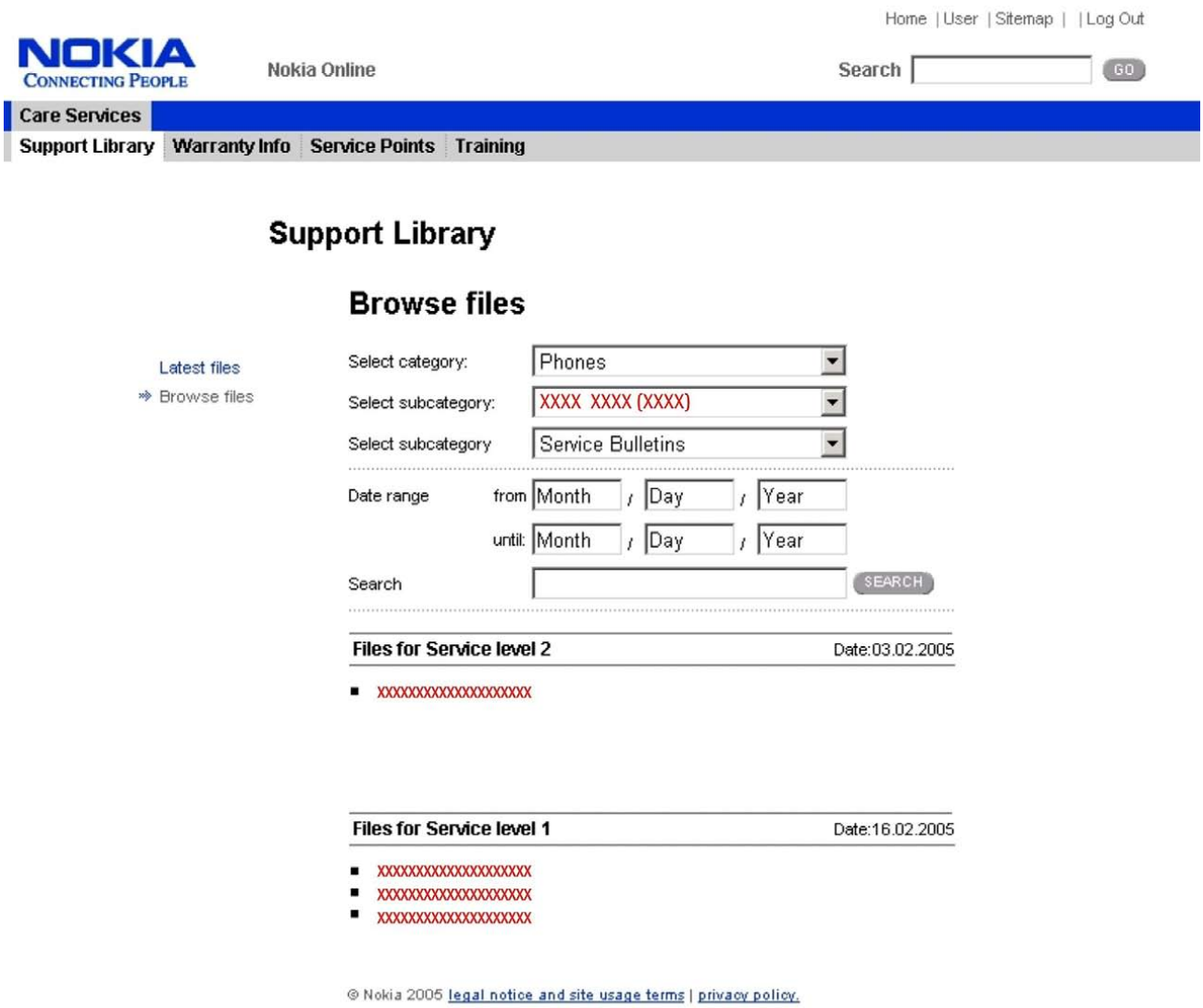
8. NOKIA ONLINE (NOL)

NOL is the database where you can find the latest corresponding Service Bulletins (spare parts, SWAP units and service tools).

This will ensure, that you are using up-to-date order codes only.

Therefore Service Bulletins have to be checked from NOL on daily basis.



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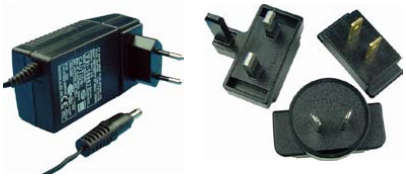
9. SERVICE TOOLS

	FLS-5 incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use.
	**ACF-8** Universal Power Supply is used to power FLS-4S.
	Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.
	Internal Battery BL-4c Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.
	SS-45 Camera removal tool.
	DKE-2 Service Cable to connect the PC with the mini USB connector.
	SS-101 Domesheet alignment jig

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	RJ-148 Soldering Jig
	Lead-free Solder Wire Mandatory for lead-free products (Level 2 only).
	0772040 NMP Standard Toolkit (V2) For more informations refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in "**Recommended service equipment**" document on NOKIA Online.

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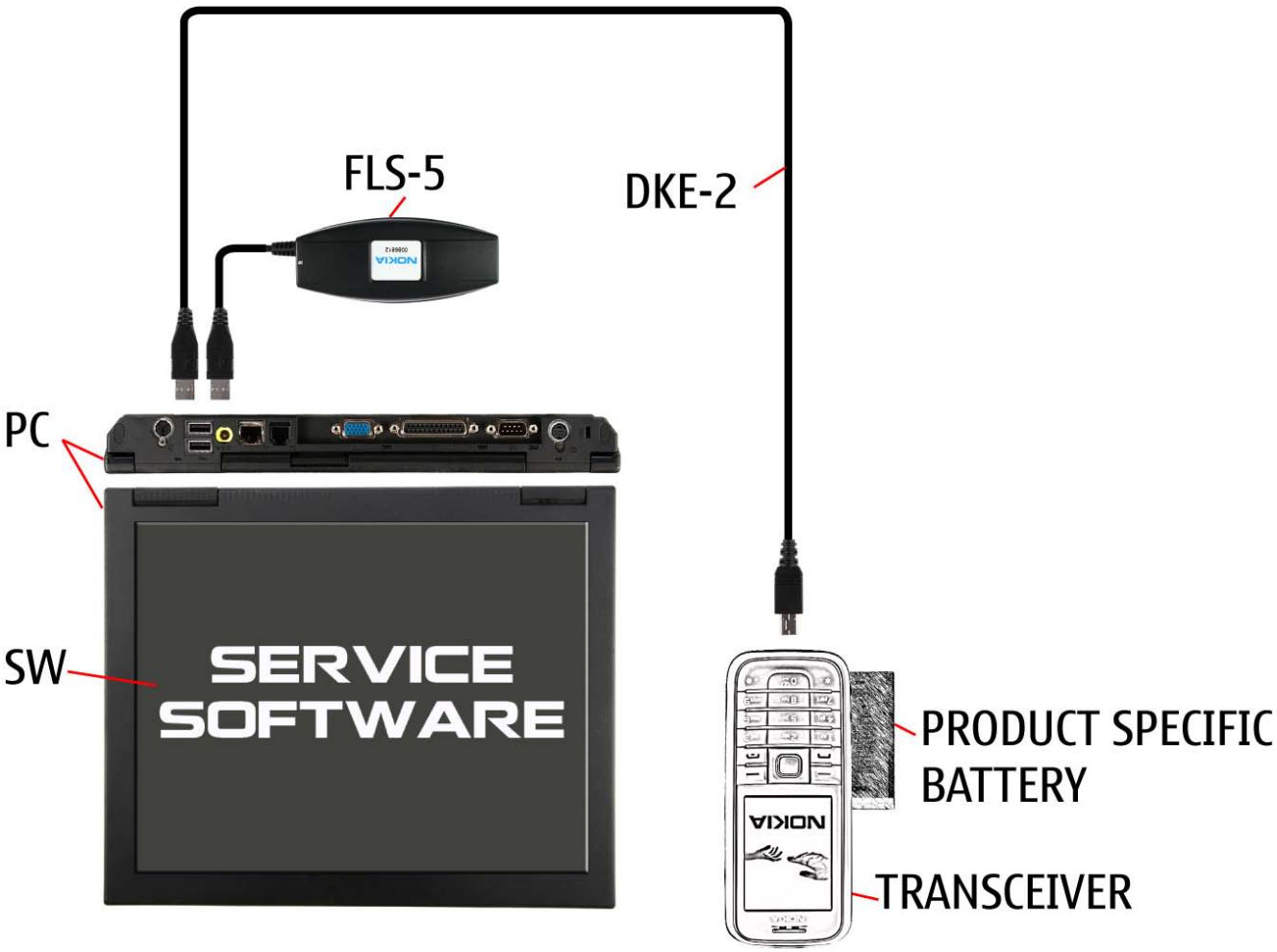
10.SW-UPDATE

Flash Concept – (Point of Sales)

To use FLS-5 Flash Dongle you have to follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on
NOKIA Online.



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11. DISASSEMBLY - HINTS

1. Needed tools: SRT-6, metal tweezers, SS-93, SS-45 camera removal tool, a straight bladed screwdriver, dental pick, bit holder with a torx plus size 6 bit, a torque driver, DC plug

2. Always cover the windows with a protective film.

3. Shift out the C-COVER.

4. Remove both screws in the order shown.

5. Remove the screws.

6. Unlock the plastic clips of the A-COVER with the SRT-6...

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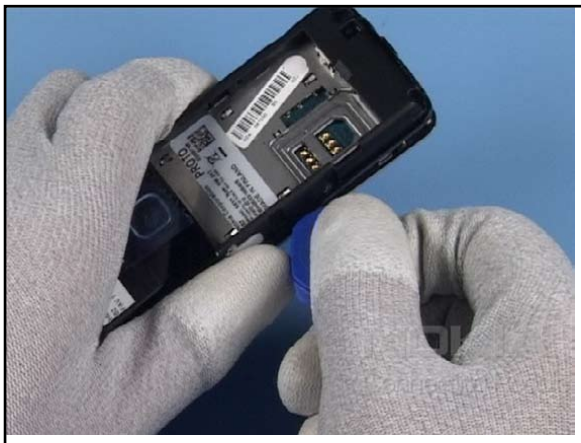
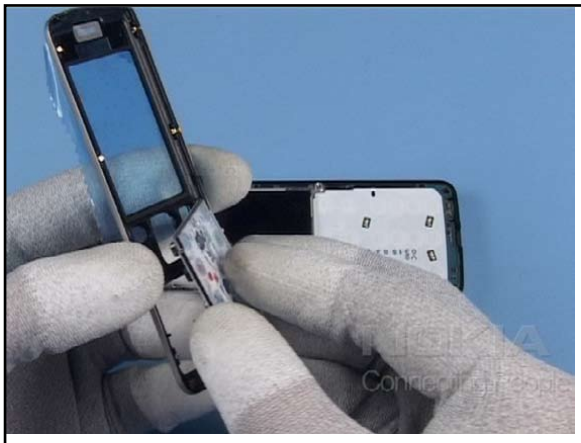
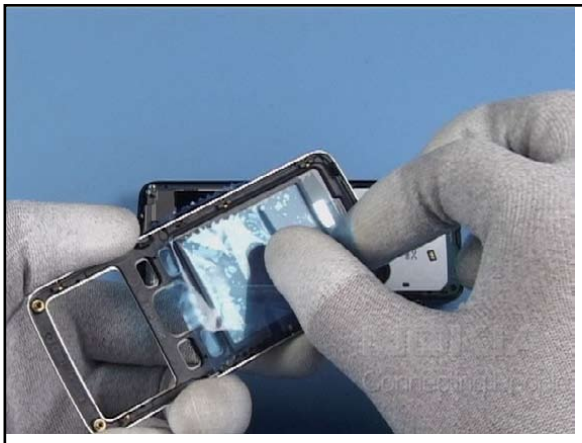


7. ...on both sides.

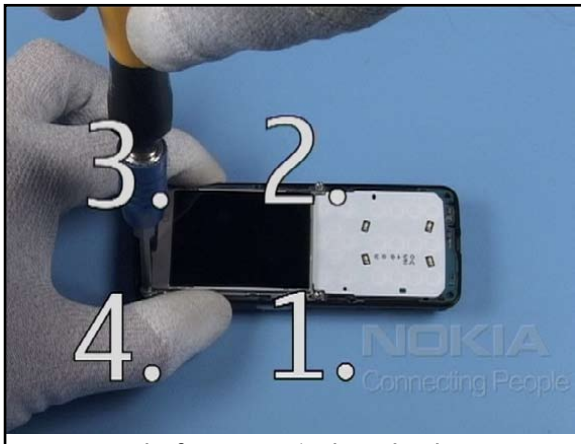
8. Lift up the cover now.



9. Remove the KEYMAT



10. Protect the window from inner side.



11. Unscrew the four screws in the order shown.

12. Remove the screws. Separate these screws, do not mismatch them with the others.

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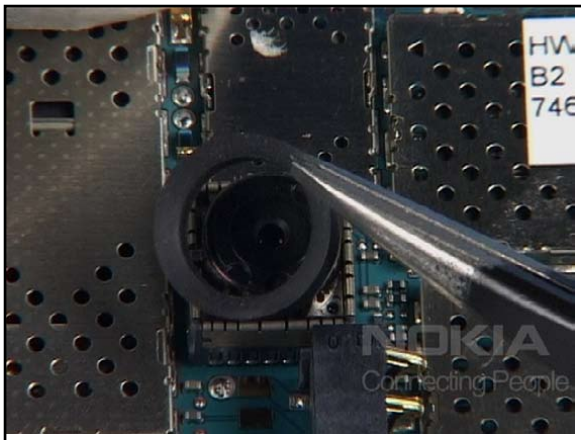
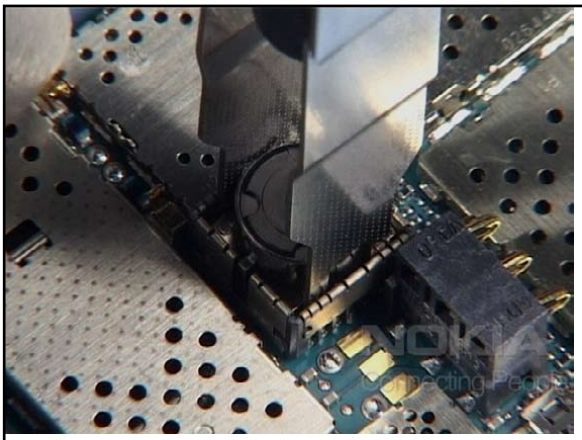
13. Cover the display with a film.

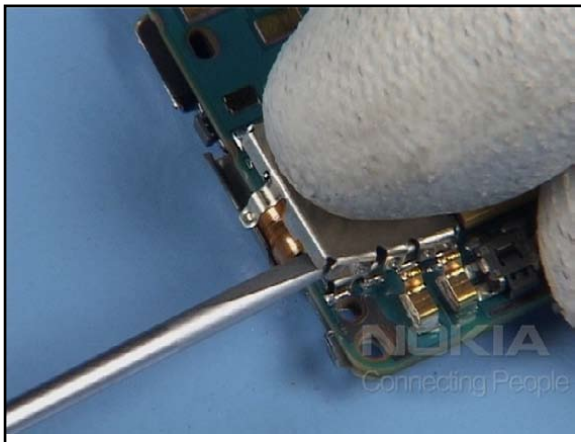
14. Turn the assembly, lift up the B-COVER.



15. Remove the CAMERA GASKET.



16. Unlock and remove the CAMERA with the SS-45.



17. Release the FLEX SHIELDING LID and discard it.

18. Do not use it again.

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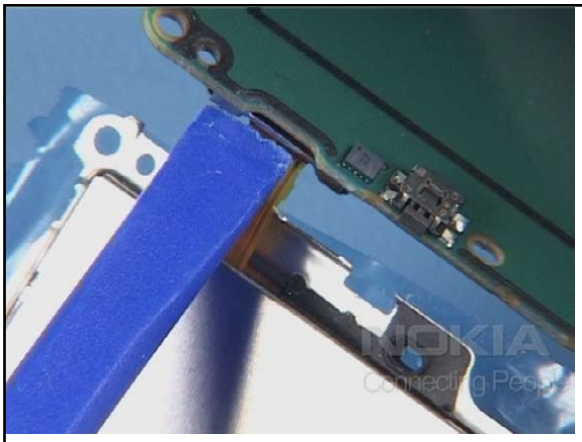
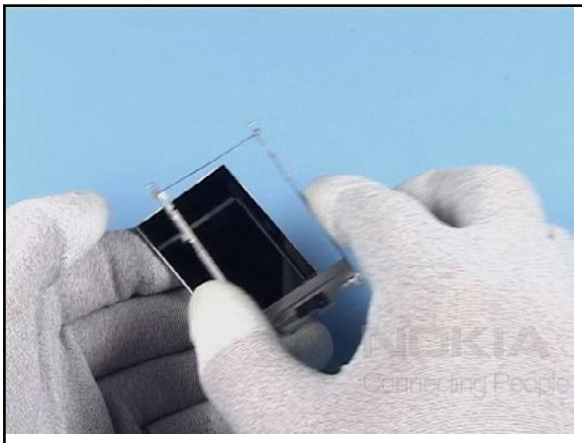
19. Unlock both metal clips of the UI SHIELD.



20. Carefully unlock the flex connector of the LCD MODULE.

21. Peel up the protective film.



22. Now separate the parts as shown.

23. Cover the display with a film again.

24. Remove the MICROPHONE and the DC JACK.

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25. Carefully lever out the EARPIECE ASSEMBLY.

26. Carefully unlock the clip securing the PLASTIC CHAMBER.

27. Now remove it.

28. The IHF SPEAKER is not glued and can be removed easily.

29. Carefully release the clips of the LED- and the SIDE WINDOW.

30. The POWER- and the VOLUME KEY can be removed easily.

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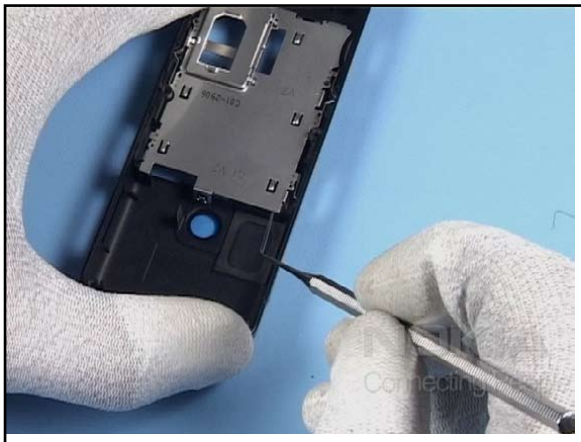
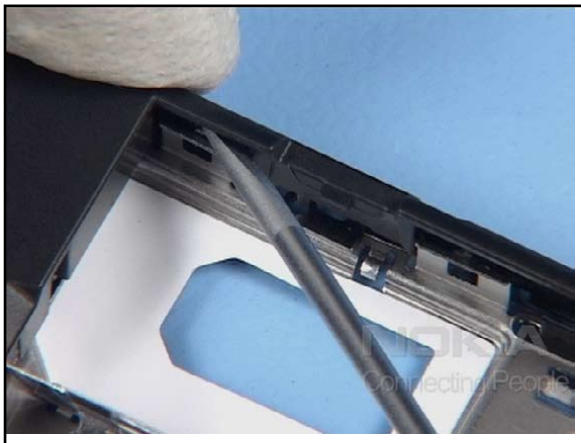


31. Release the shown metal snaps of the LABEL COVER ASSY with the dental pick.

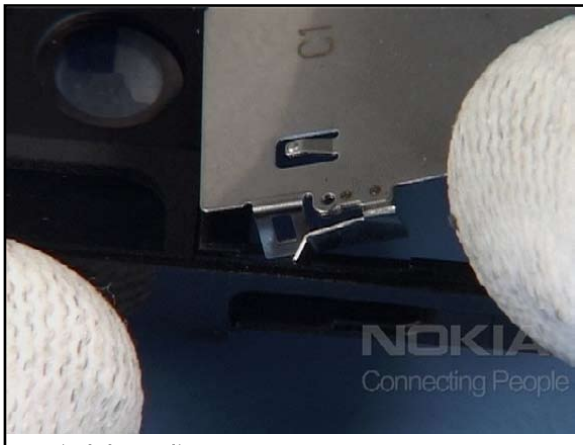
32. Turn the assembly and open the SIM lid.



33. Now release these two latches.

34. Use the dental tool to push out the last clips.

35. Release the LABEL COVER ASSEMBLY, beginning from the bottom side.



36. Mind these clips.

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37. The disassembly procedure is now completed.

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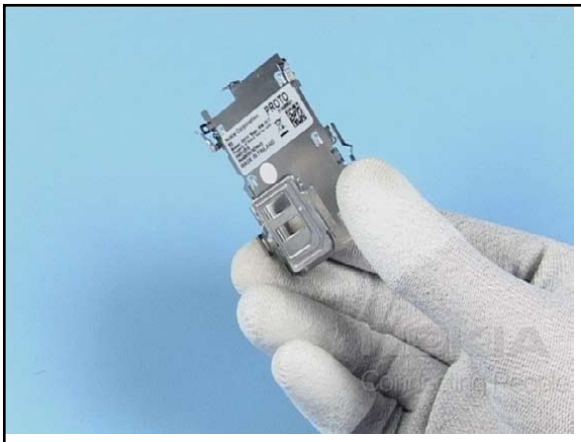
12. ASSEMBLY - HINTS

1. Assembly hints:



2. Keep in mind that the LABEL COVER ASSEMBLY with the TYPE LABEL must always be assembled together with the corresponding engine module.

3. Insert the LABEL COVER ASSEMBLY into the B-COVER as shown.

4. Carefully push all latches into their places.

5. Close the SIM lid.

6. Check the correct positioning of all these latches.

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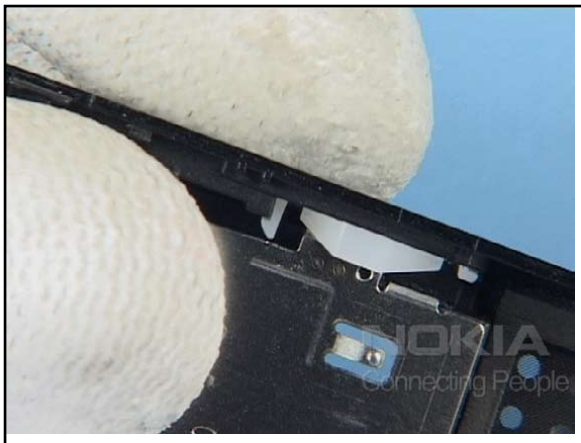
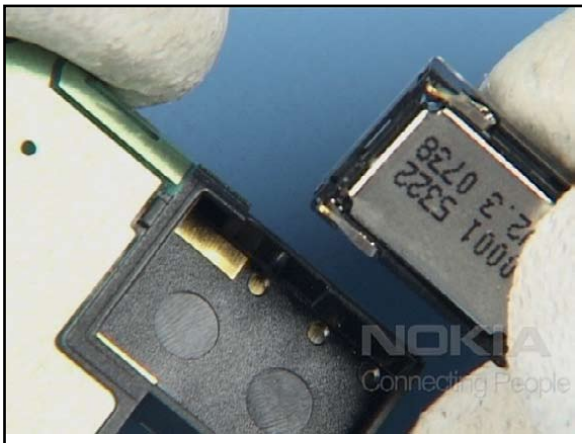


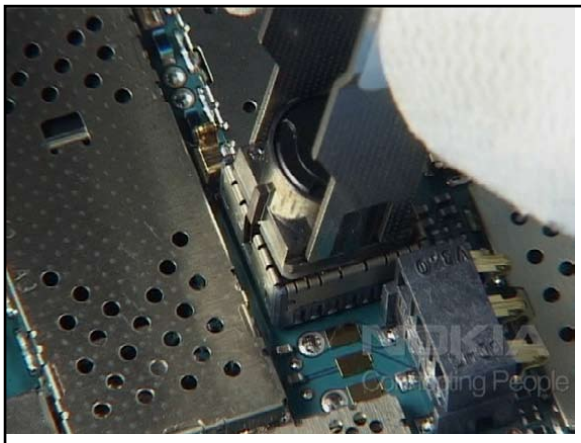
7. Insert the LED- and the SIDE- WINDOW. Note that they can't be interchanged.



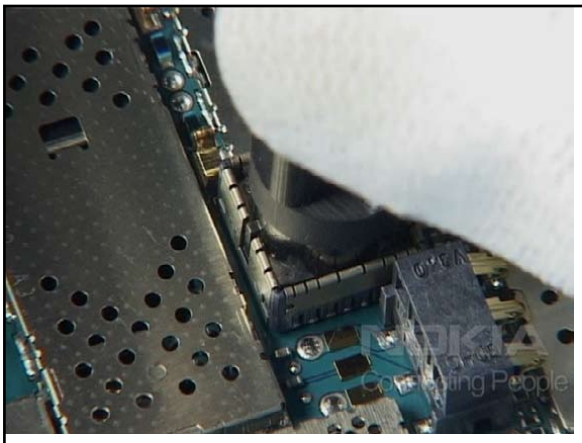
8. Note that the IHF SPEAKER contacts belongs to their pads.

9. Secure all clips of the PLASTIC CHAMBER before going on.

10. Always use a new FLEX SHIELDING LID.



11. Mind the guiding tab while replacing the CAMERA.



12. Push it into its place.

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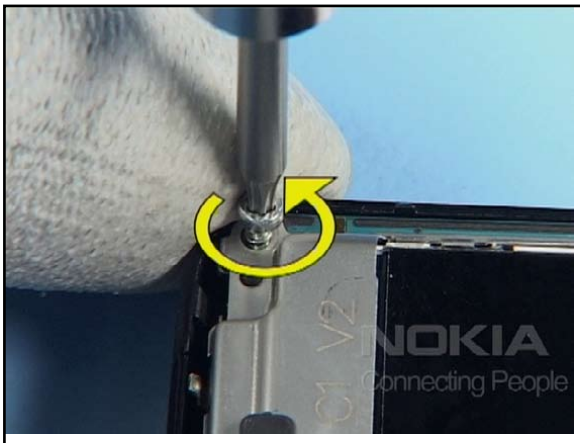
13. Set the correct torque.



14. Turn the screws to the left first to engage the threads, then tighten them slightly.

15. Apply the correct torque to all screws in the order shown.

16. Tighten both screws of the C-COVER in the order shown, too.

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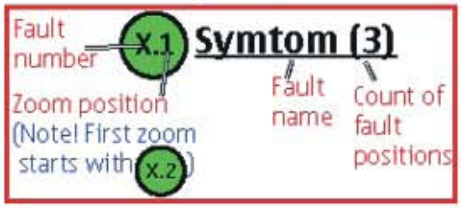
13. LEGEND FOR QUICK TROUBLE SHOOTER

Legend for Quick Trouble Shooter

This legend is valid for all parts of the Quick Trouble Shooter

Follow the steps until the problem is solved. If this doesn´t help, you are not authorized to go forward.

	Check the mechanical condition of the component (bent, broken or missing).
	Only marked components can be replaced. If additionally "**=CHANGE ASSY**" appears, then change the whole assembly (e.g. A4=D-COVER ASSEMBLY).
	Cloth usage: Check pads or contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.
	Measure component for electrical functionality and change, if needed. (Level 2 only)
	ESD Brush usage: Check contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.
	Explanation 

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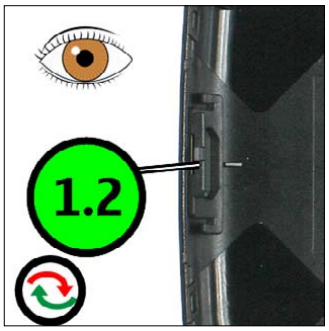
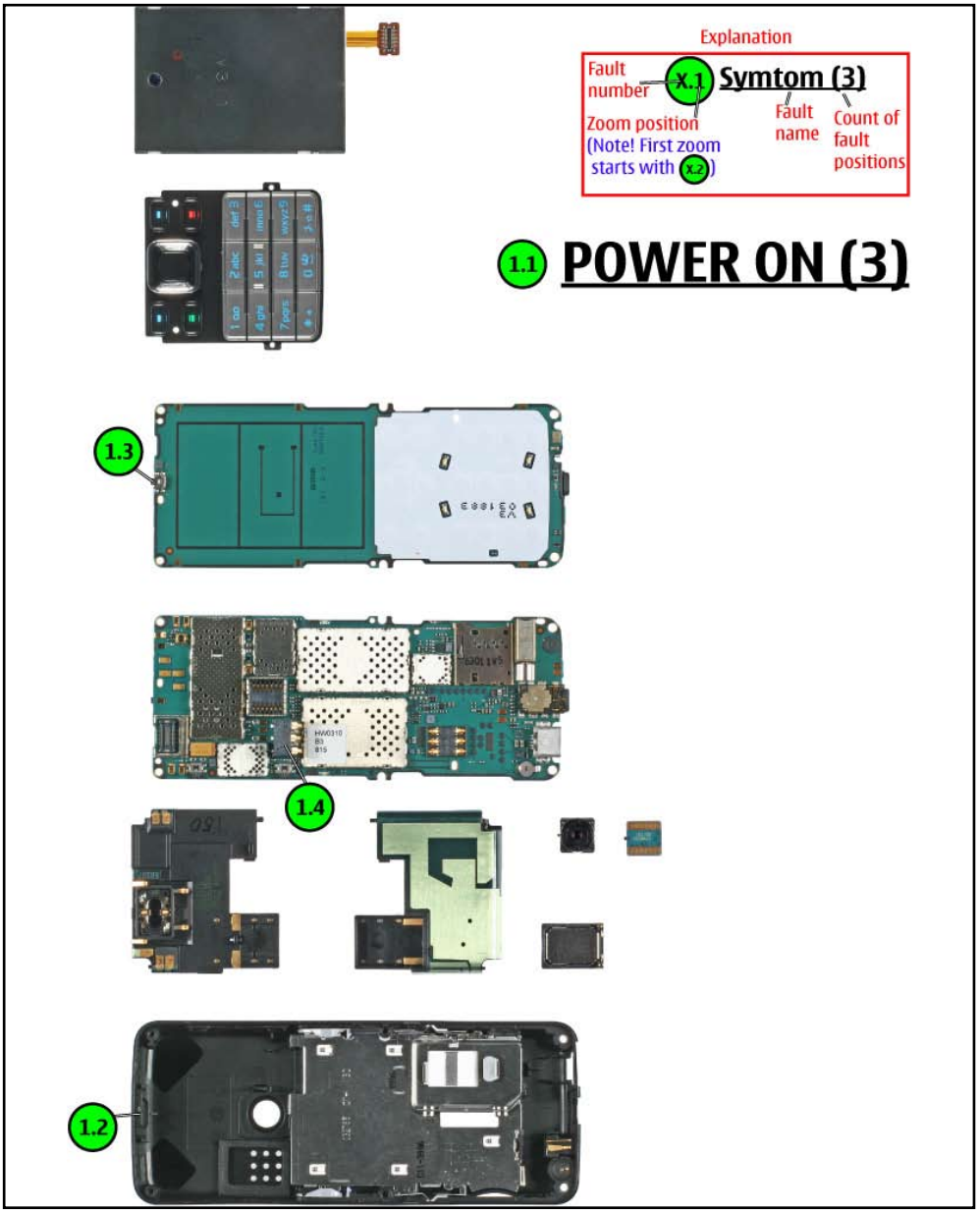
14. QUICK TROUBLE SHOOTER - POWER ON





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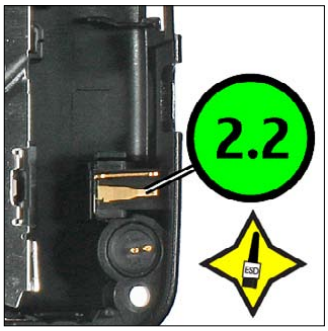
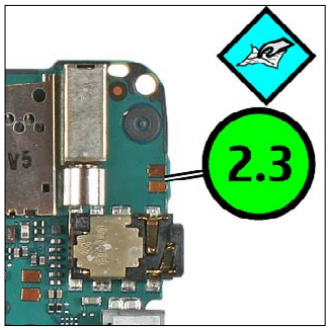
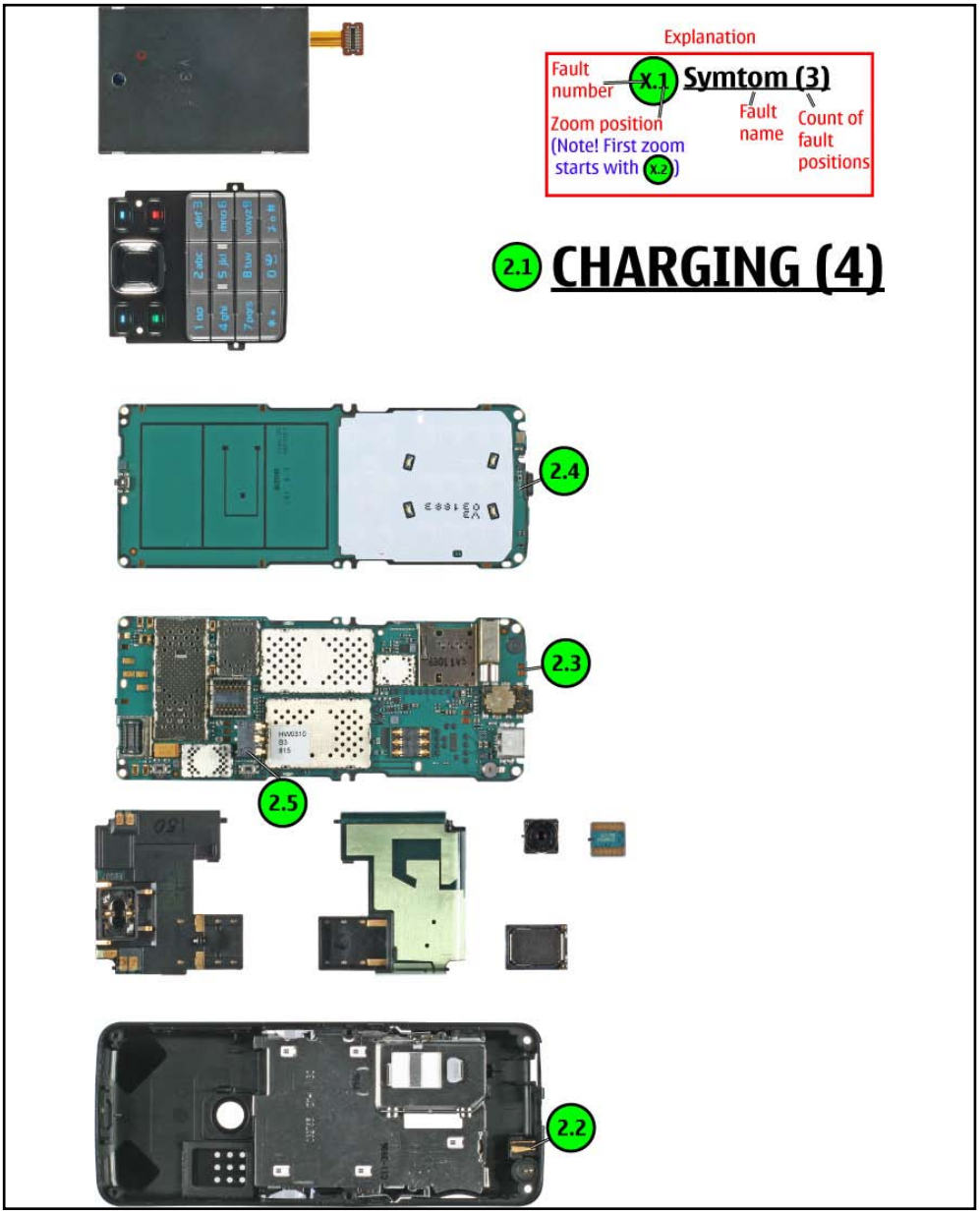
15. QUICK TROUBLE SHOOTER - CHARGING







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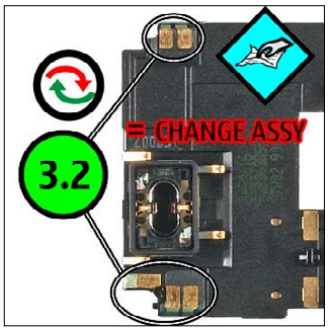
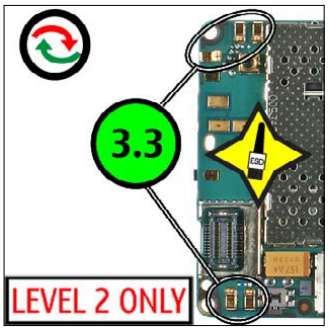
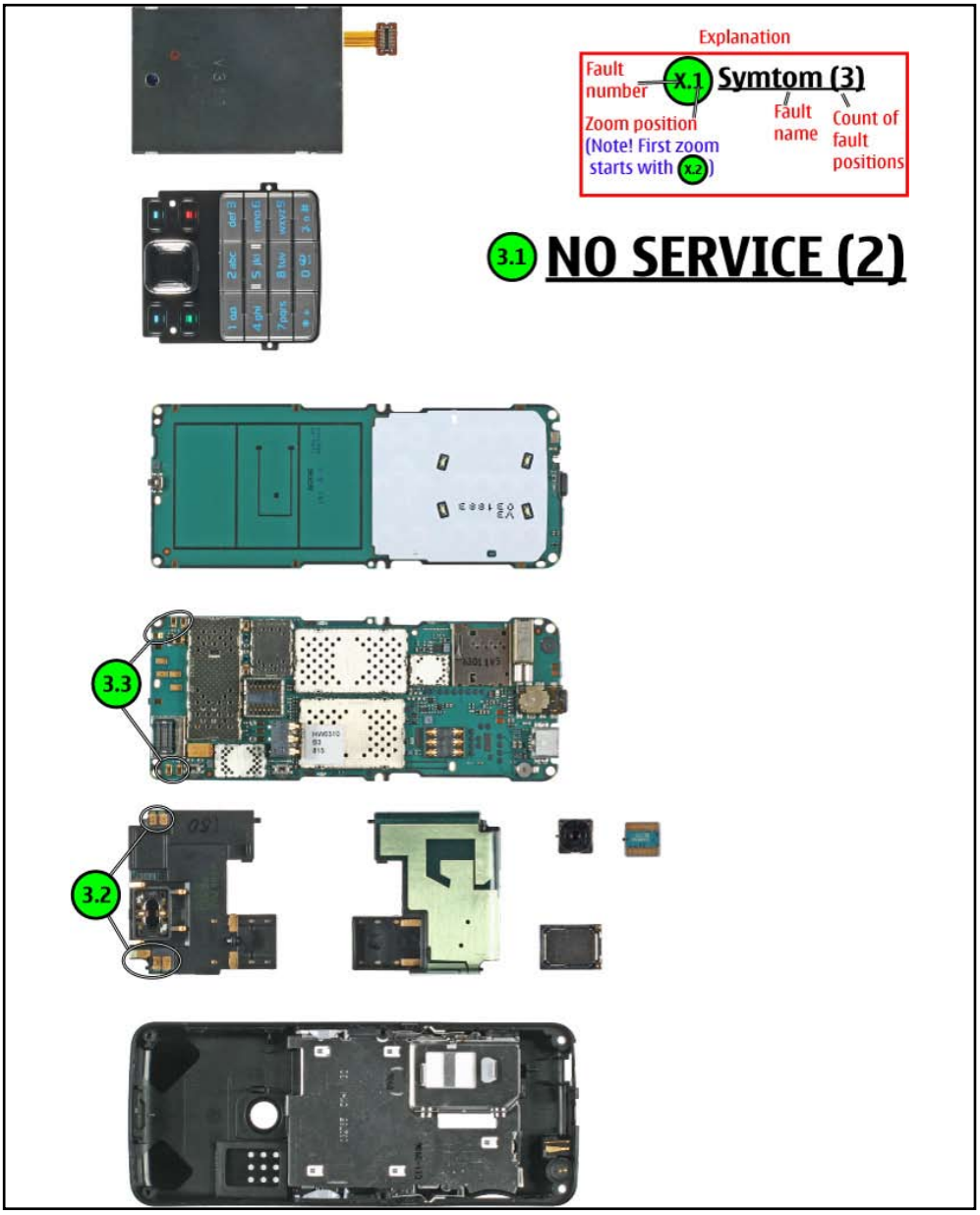
16. QUICK TROUBLE SHOOTER - NO SERVICE







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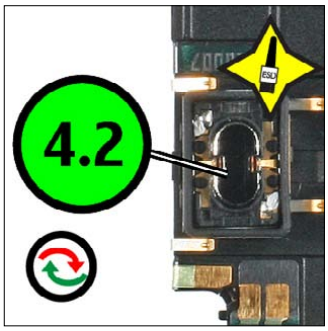
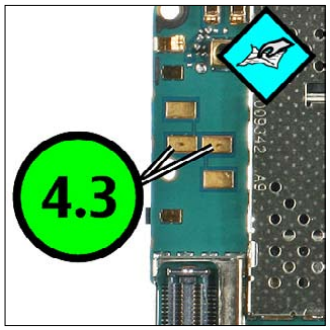
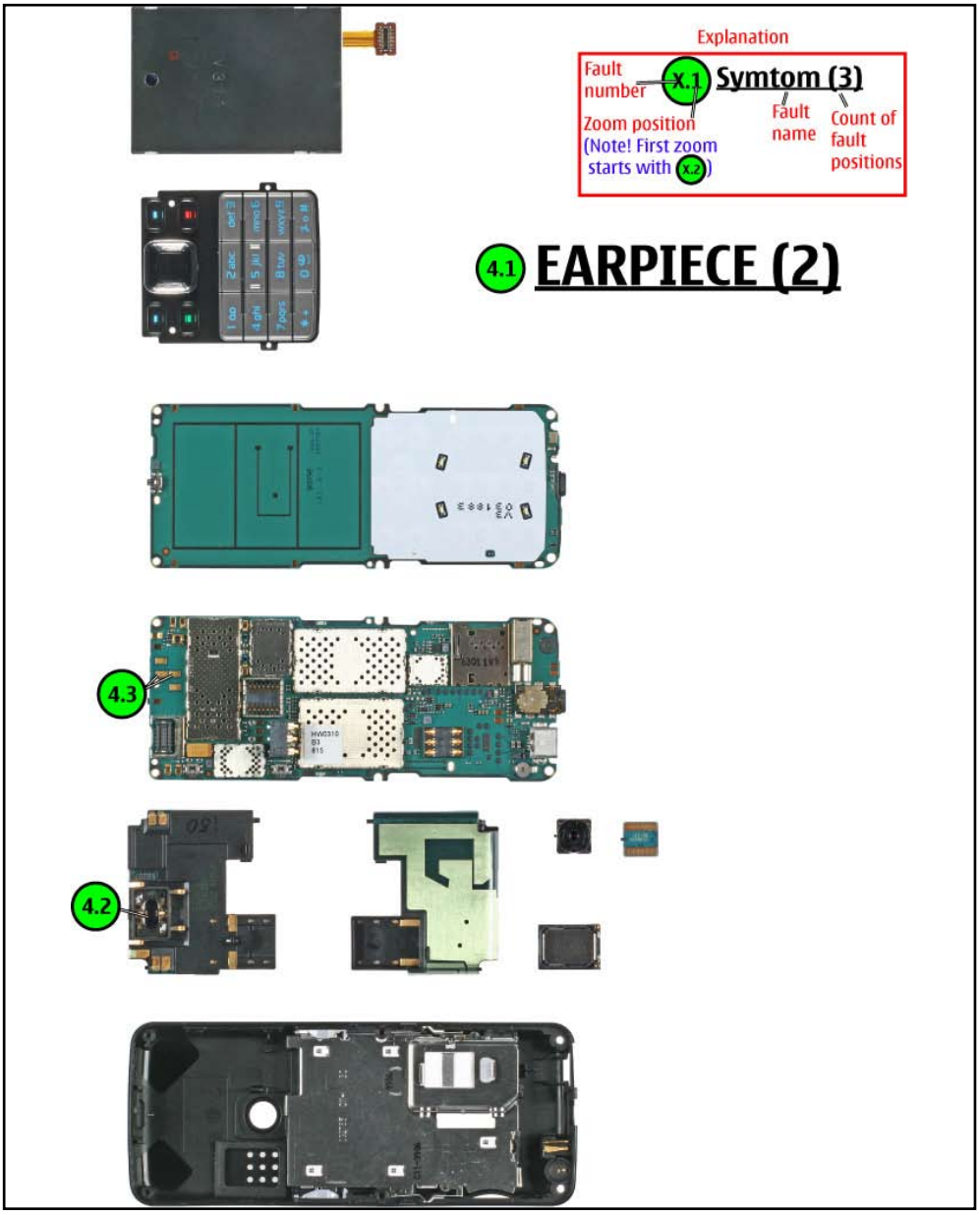
17. QUICK TROUBLE SHOOTER - EARPIECE







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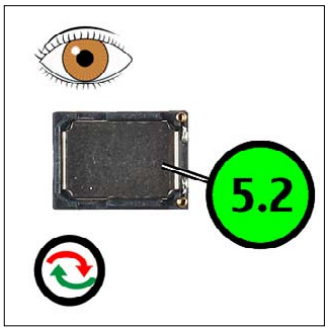
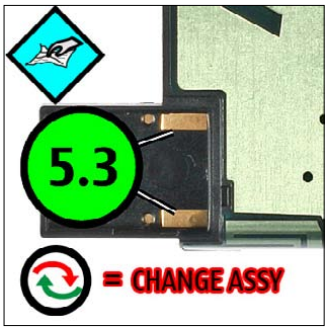
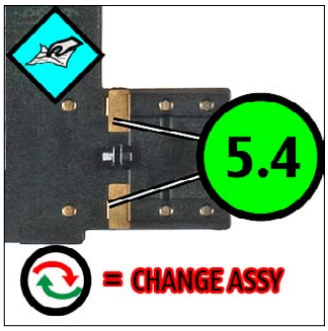
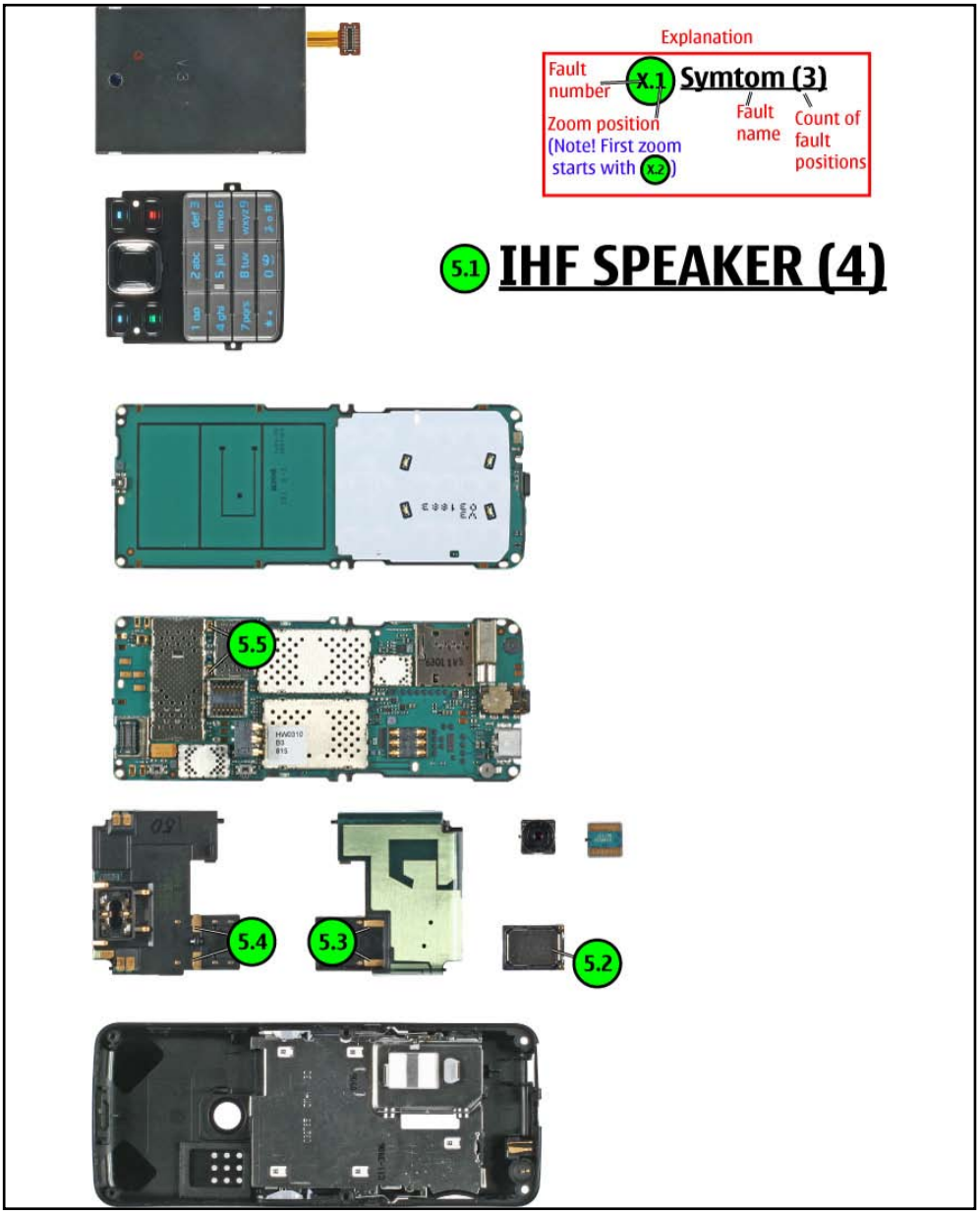
18. QUICK TROUBLE SHOOTER - IHF SPEAKER









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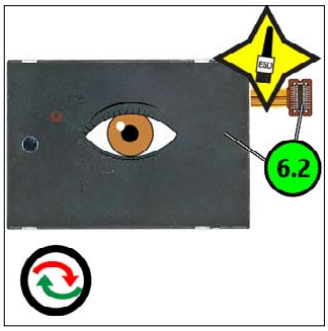
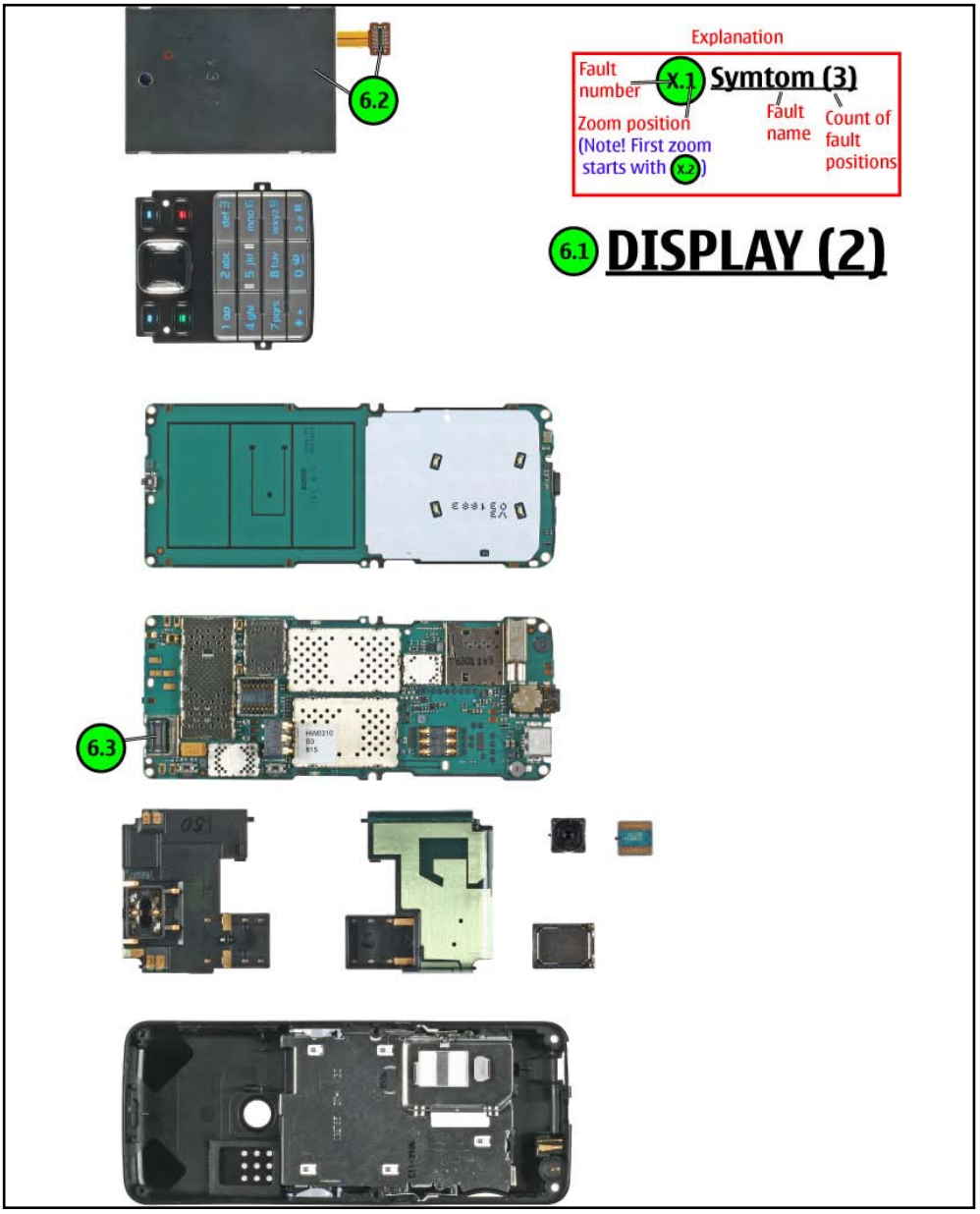
19. QUICK TROUBLE SHOOTER - DISPLAY





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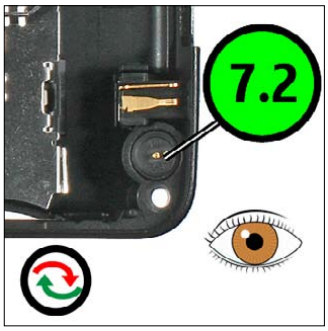
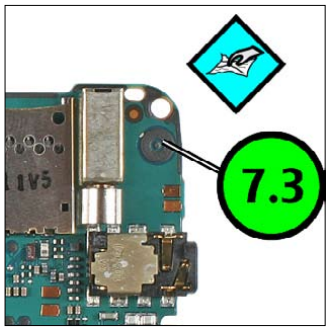
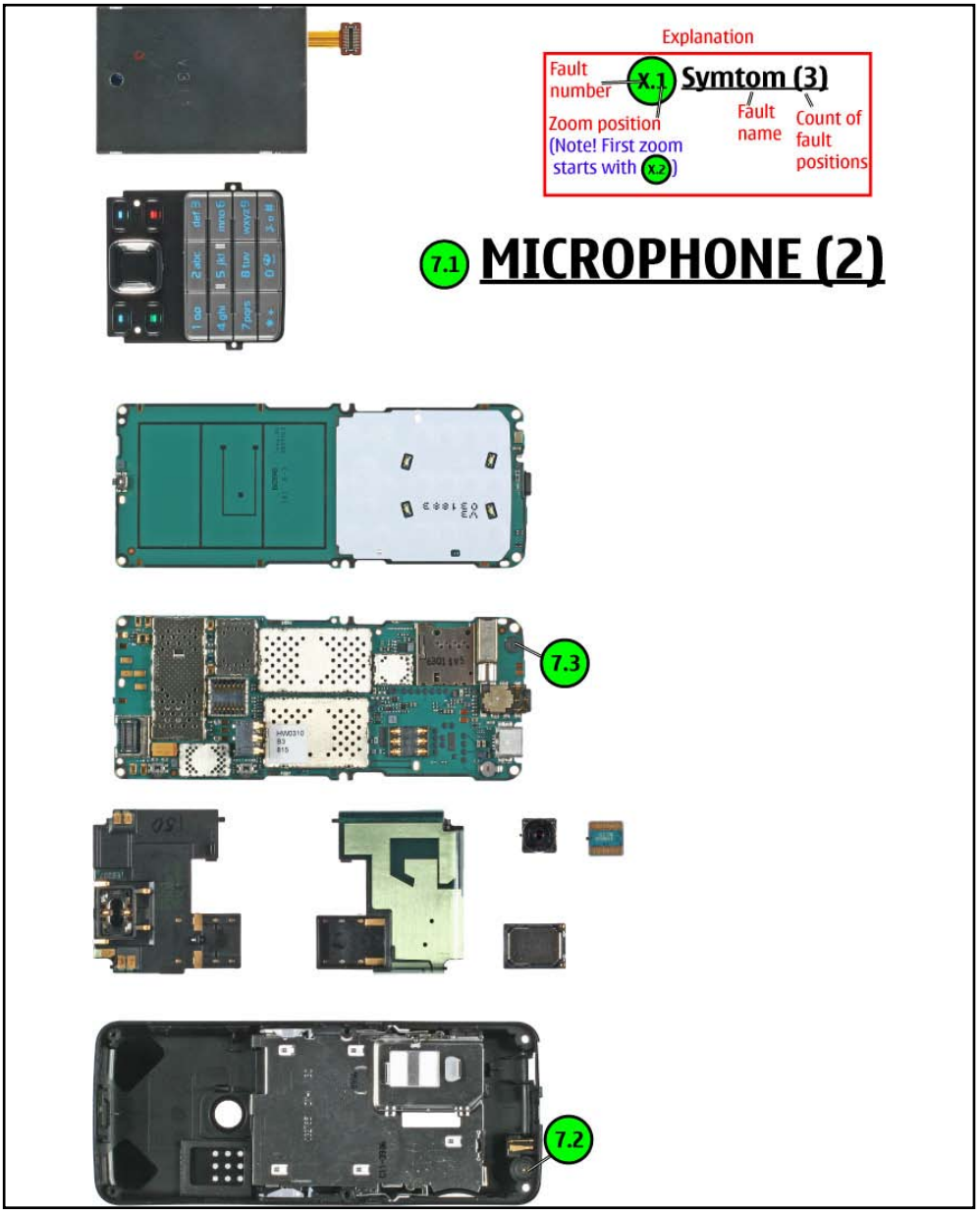
20. QUICK TROUBLE SHOOTER - MICROPHONE







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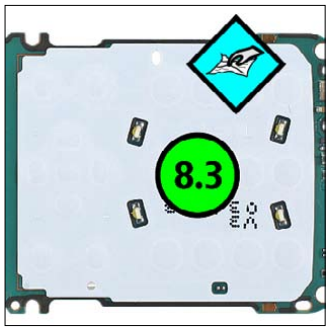
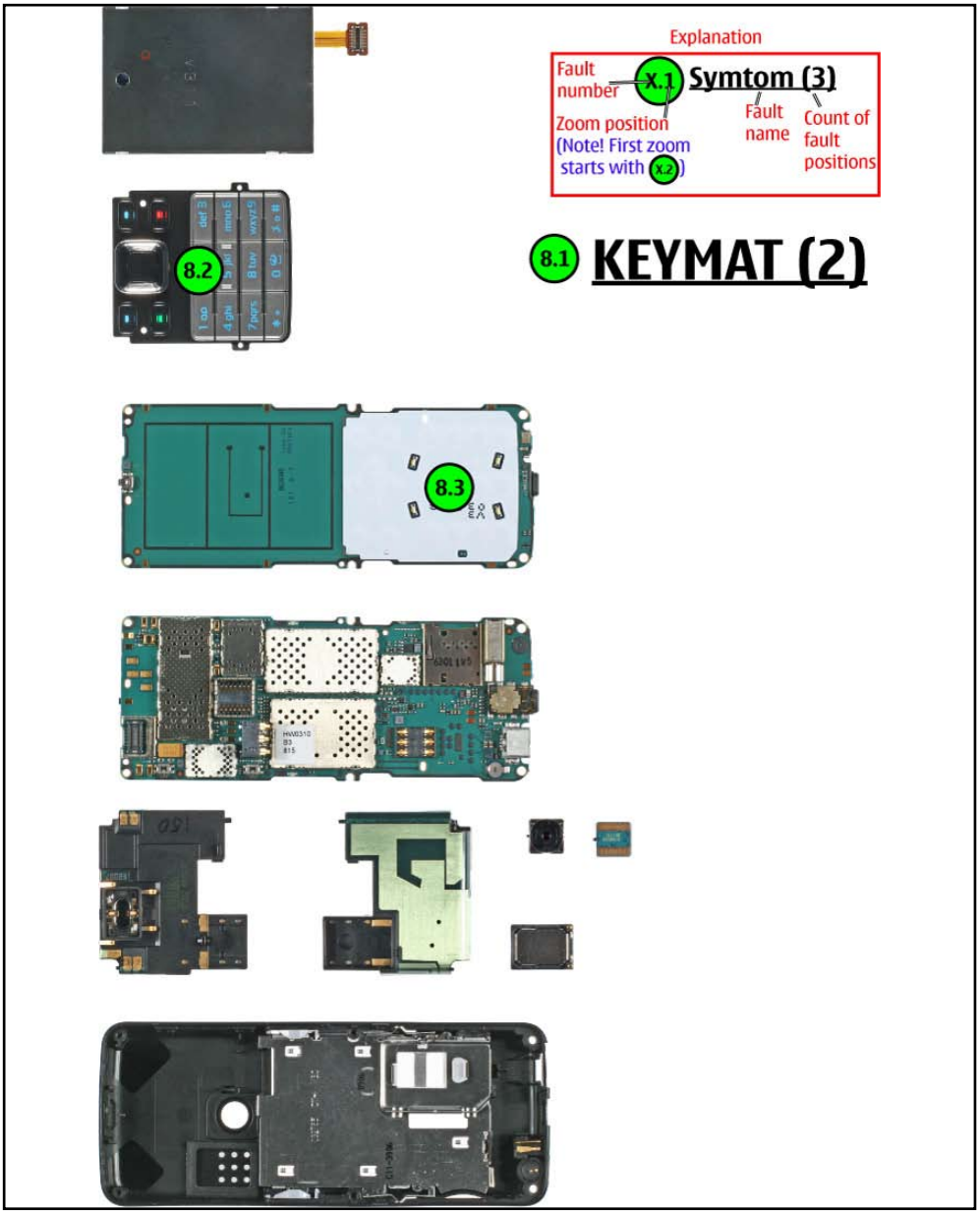
21. QUICK TROUBLE SHOOTER - KEYMAT





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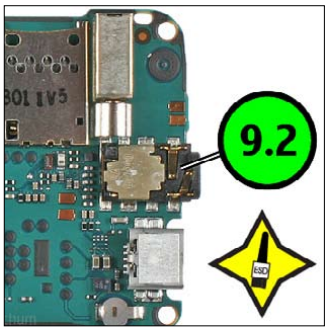
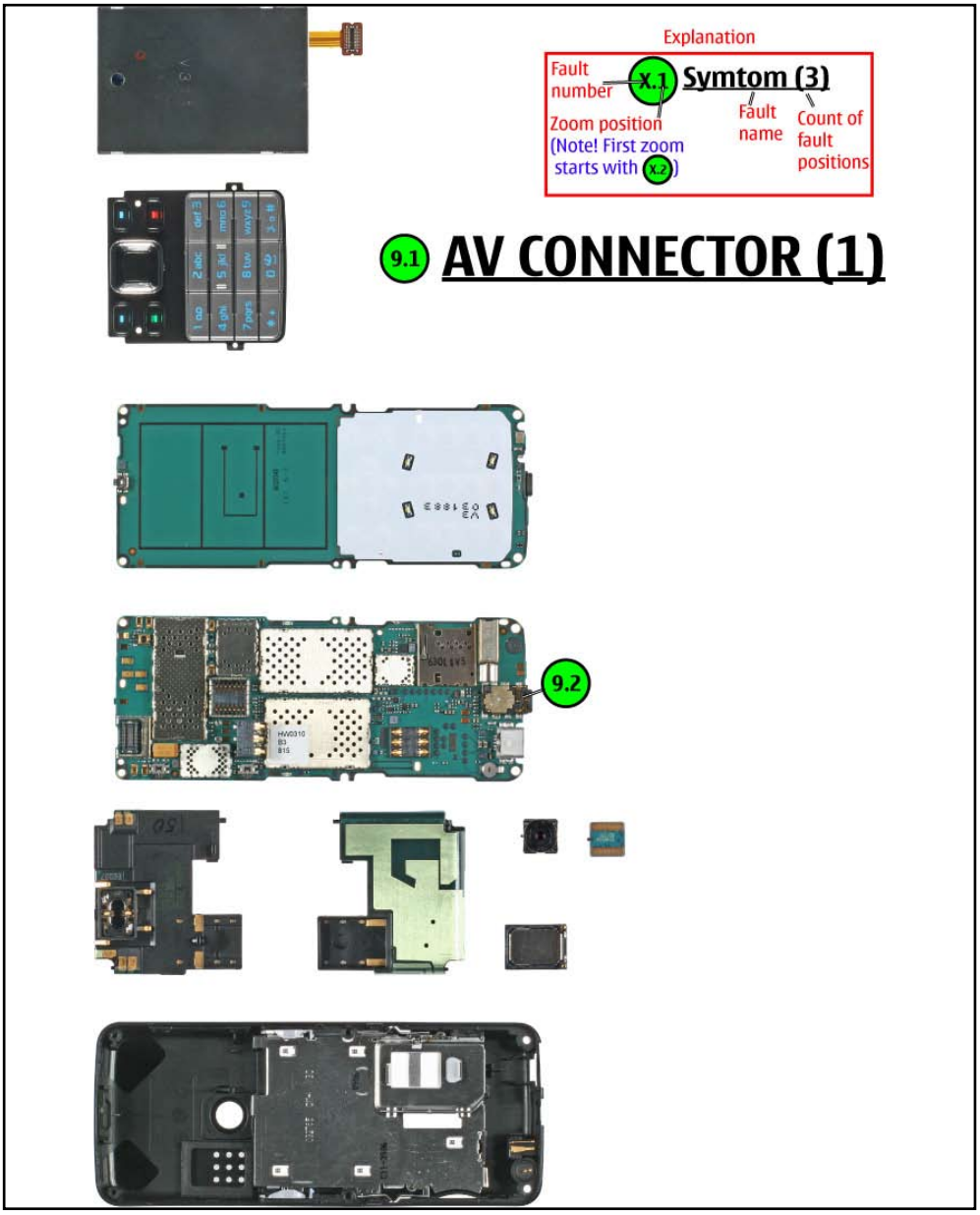
22. QUICK TROUBLE SHOOTER - AV CONNECTOR





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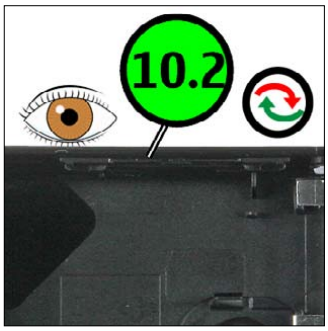
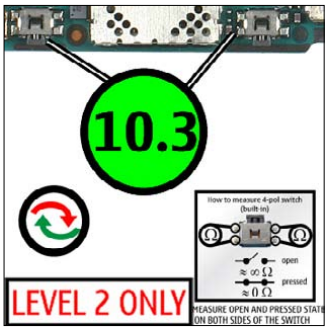
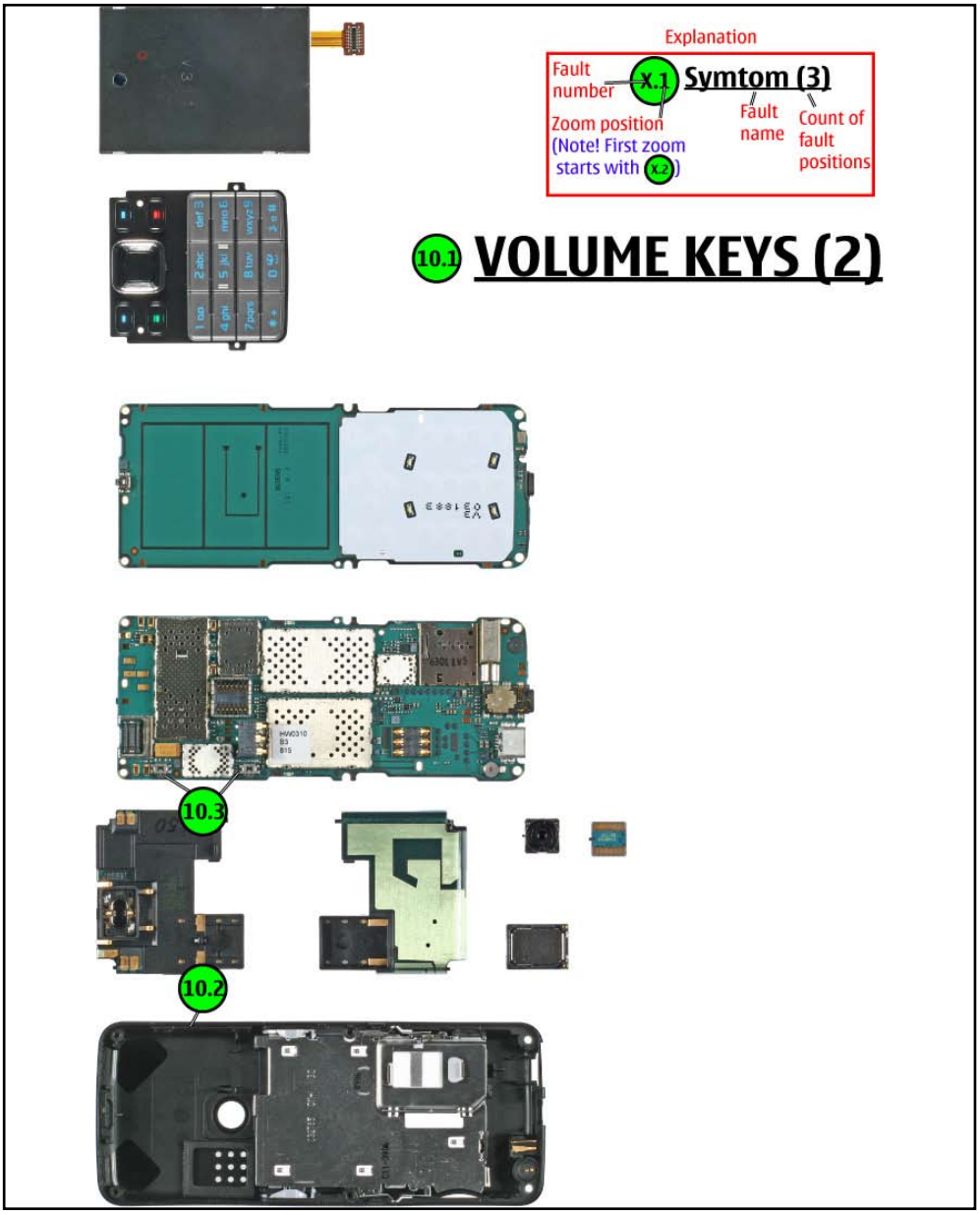
23. QUICK TROUBLE SHOOTER - VOLUME KEYS







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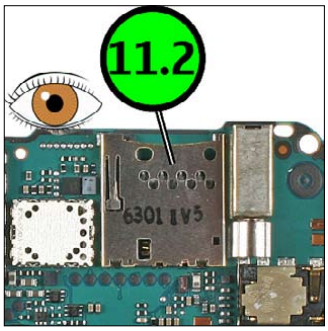
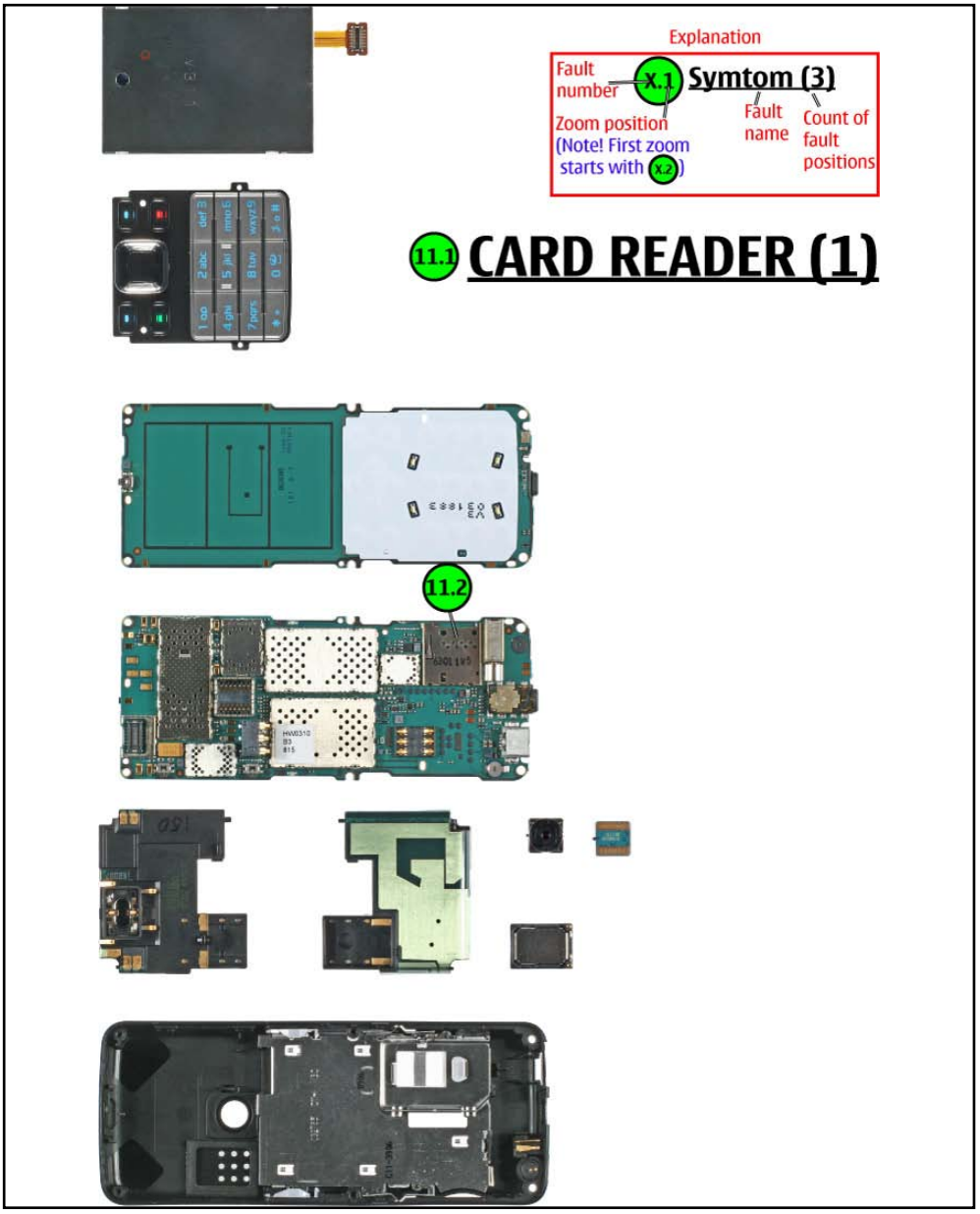
24. QUICK TROUBLE SHOOTER - CARD READER





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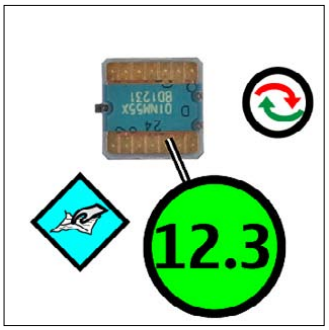
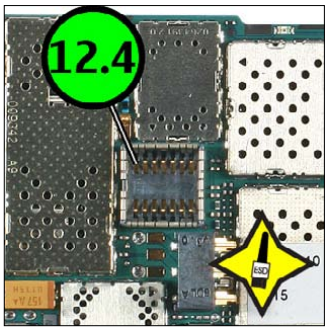
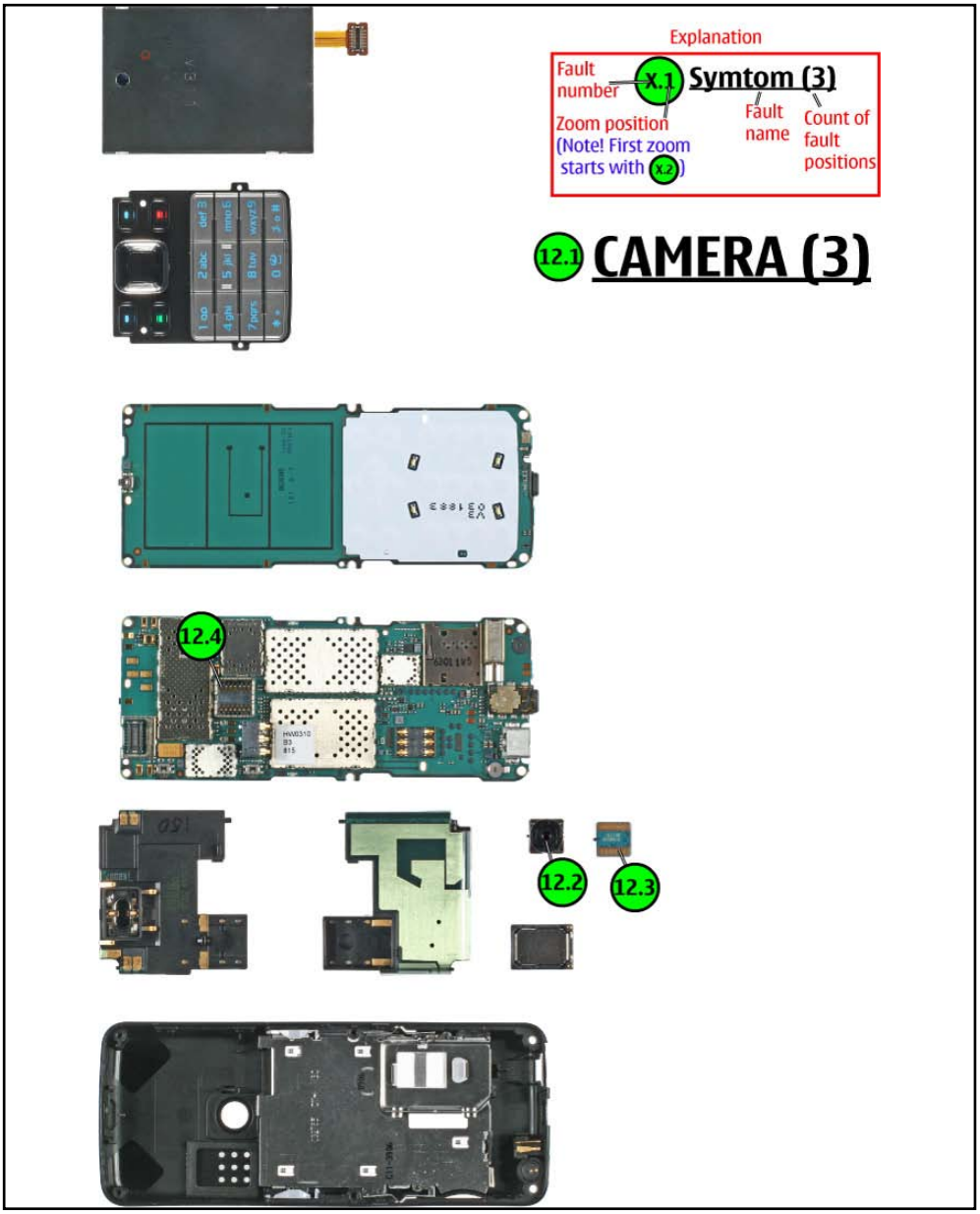
25. QUICK TROUBLE SHOOTER - CAMERA







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26. GONOGO TEST

To test the Camera and Bluetooth functionality refer to the phone User`s guide.

The User´s Guide is available on www.nokia.com.

Before starting the GoNoGo test, check that camera window is clean. If not, clean the window with cloth.

Bluetooth test
You need another Bluetooth device (e.g. 6230) to do a GoNoGo test.
Make sure that Bluetooth is activated in the reference unit. The distance of the devices should be not more than 5m from each other.

Reference unit, Bluetooth activated

Test unit

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27. BATTERY TEST

A battery tester lets you test the capacity of NOKIA batteries.

Please refer to the actual information on NOKIA Online.

http://www.astratec.co.uk/

http://www.cadex.com/

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